

Name:\_\_\_\_\_

Date:\_\_\_\_\_

Period:\_\_\_\_\_

**Unit 2 Test – Form A**

Identify the independent and dependent variables in the situation. Then find a reasonable domain and range. (4 points)

**Situation:** Tim mows lawns as a weekly job. He charges \$15 per lawn. Tim can mow as many as 9 lawns throughout the week.

**Independent Variable:**

**Dependent Variable:**

**Domain:**

**Range:**

The relationships in the tables below are functions. Define your variables and write a function rule to describe the relationship. (6 points)

X	Y
1	7
2	13
3	19
4	25

Number of weeks	Total Savings
1	\$52
2	\$64
3	\$76
4	\$88

Between what to consecutive integers is each square root? **NO CALCULATOR!**  
(3 points)

$\sqrt{175}$

$\sqrt{21}$

$\sqrt{255}$

Simplify each square root. **NO CALCULATOR!** (3 points)

$\sqrt{196}$

$-\sqrt{225}$

$\sqrt{\frac{49}{144}}$

Simplify each square root. Round your answer to the nearest hundredth. (3 points)

$-\sqrt{188}$

$\sqrt{872}$

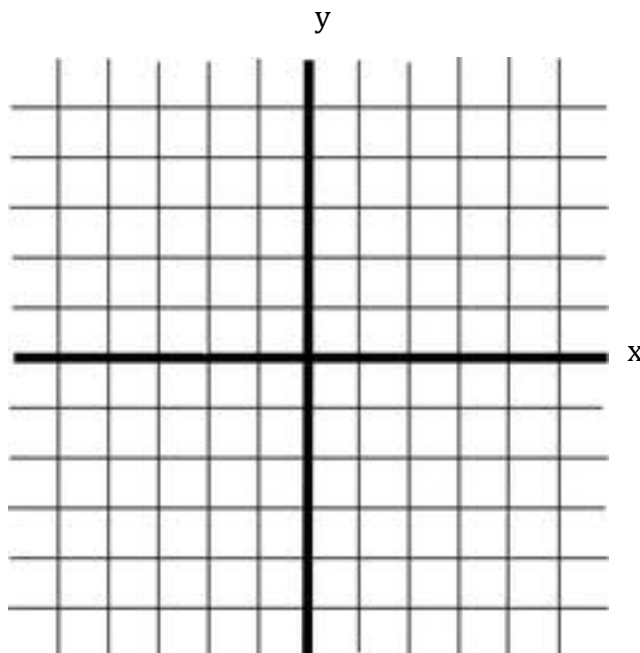
$\sqrt{53}$

Given the two coordinates, find the distance between the two points. (2 points)

**(4, -5) (-1, 3)**

Plot the following points on the coordinate plane. (1 point)

**A (4, -1) B (-5, 2)**



Calculate the midpoint. (2 points)

Plot the midpoint on the line segment – on the coordinate plane. (1 point)

Who was Pythagoras? (1 point)

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Who were Pythagoreans? What did they look like and eat? (2 points)

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Describe the Pythagorean theorem. Write in complete sentences. (3 points)

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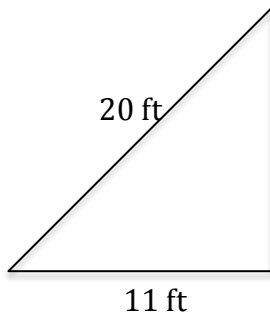
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A triangle has side lengths 12 in, 14 in, and 16 in. Is this a right triangle? (2 points)

Find the length of the missing side. (2 points)



Use the Pythagorean theorem to solve the following situation.

**Situation.** Mr. Figueroa needs to hang a banner 15 ft up on the front of the school building. He has an 8 foot ladder. How far away does he need to place the ladder in order to reach the spot on the building where he needs to hang the flag? (5 points)

*Step 1:*

*Step 2:*

*Step 3:*

*Step 4:*